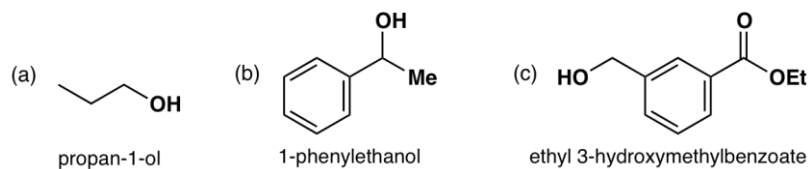
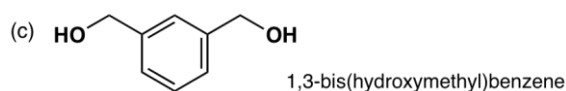


Solutions to Exercises, Chapter 10

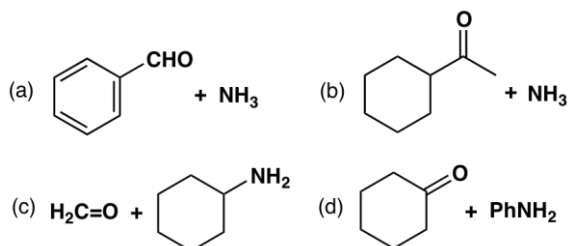
10.1



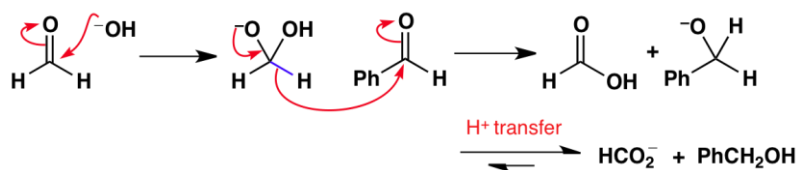
10.2 (a) and (b): the same as for Exercise 10.1.



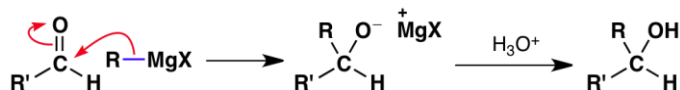
10.3 React the following pairs of compounds with H_2/Ni or NaBH_3CN at pH 6.



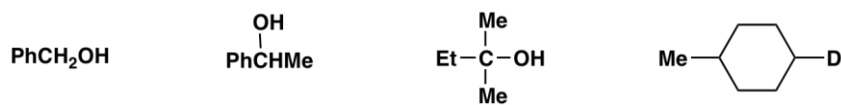
10.4



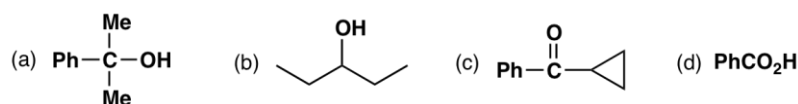
10.5



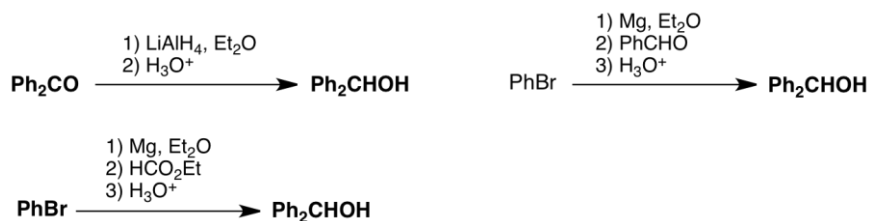
10.6



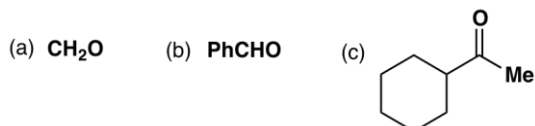
10.7



10.8



10.9 All the alcohols given have an ethyl group on the carbon bearing OH, so EtMgBr is the common Grignard reagent and is reacted with the following carbonyl compounds: aqueous workups give the required alcohols.



10.10 An ester carbonyl is less electrophilic than a ketone carbonyl due to the electron-donating resonance effect of the alkoxy oxygen (see Section 9.4.3), so nucleophilic attack at the (protonated) ketone group is the preferred reaction.